T2-020050

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

March 13, 2003

CERTIFIED MAIL No. 7000 1670 0013 9128 9073

Mr. Bill Hinson
Quality Manager
Western Electronics Inc.
1550 S. Tech Lane
Meridian, ID 83642

RE: AIRS Facility No. 001-00190, Western Electronics Inc., Meridian
Final Revised Permit to Construct and Tier II Operating Permit

Dear Mr. Hinson:

The Department of Environmental Quality (Department) has prepared final Tier II Operating Permit and Permit to Construct No. 001-00190 for Western Electronics Inc. in accordance with IDAPA 58.01.01.400 - 461 and 58.01.01.200 - 228 *Rules for the Control of Air Pollution in Idaho (Rules)*, respectively.

The enclosed, revised permit is effective immediately and is based on comments raised during the October 17, 2002 permit handoff. None of the revisions result in an increase in emissions; therefore, public notice and a public comment period are not required. Likewise, a second permit handoff is not required because the revised permit resolves the concerns raised by Western Electronics, Inc. Modification to and/or renewal of this permit shall be requested in a timely manner in accordance with the *Rules*.

If you have questions regarding the terms or conditions of the final permit, please contact Bill Rogers, Permit Program Coordinator, at (208) 373-0437 or wrogers@deq.state.id.us.

Sincerely,

Stephen E. West, Administrator
Air Quality Division

SEW\WR:sm

Enclosure

C: Mike McGown, Regional Office

Bob Baldwin, AQ

Marilyn Seymore, AQ

Bill Rogers, Permit Coordinator

Sherry Davis. AQ Division/SF

Joan Lechtenberg –Public Comment

Reading File

Air Quality
TIER II OPERATING PERMIT
and
PERMIT TO CONSTRUCT

State of Idaho
Department of Environmental Quality

PERMIT NO.: 001-00190

AQCR: 64 **CLASS:** B

SIC: 3679 **ZONE:** 11

UTM COORDINATE (km): 548.2 , 4826.3

1. **PERMITTEE** Western Electronics, Inc.			
2. **PROJECT** Revised Tier II operating permit and permit to construct			
3. **MAILING ADDRESS** 1550 S. Tech Lane	**CITY** Meridian	**STATE** ID	**ZIP** 83642
4. **FACILITY CONTACT** Bill Hinson	**TITLE** Quality Manager	**TELEPHONE** (208) 955-9700	
5. **RESPONSIBLE OFFICIAL** Jim Bjorkllund	**TITLE** Plant Manager	**TELEPHONE** (208) 955-9700	
6. **EXACT PLANT LOCATION** 1550 S. Tech Lane, Meridian, Idaho		**COUNTY** Ada	
7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS** Manufacture printed circuit boards			

8. **PERMIT AUTHORITY**

This permit to construct and Tier II operating permit is issued according to the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.200-228 and IDAPA 58.01.01.400-470, respectively. This permit pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be operated by this permit. Only the terms and conditions pertaining to Tier II operating permit requirements are subject to the expiration date of this permit.

This permit is not transferable to another person, place, or piece or set of equipment and will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented in the application and the Idaho Department of Environmental Quality's technical analysis of the supplied information. Changes in design or equipment that result in any change in the nature or amount of emissions may be considered a modification. Modifications are subject to Department review in accordance with IDAPA 58.01.01.200 et al.

C. STEPHEN ALLRED, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED: March 13, 2003

DATE EXPIRES: August 23, 2007

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AQCR	Air Quality Control Region
CO	carbon monoxide
Department	Department of Environmental Quality
dscf	dry standard cubic feet
gr	grain (1 lb = 7,000 grains)
gr/dscf	grains per dry standard cubic foot
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/day	pounds per day
lb/hr	pounds per hour
lb/mo	pounds per month
lb/yr	pounds per year
MMscf/yr	million standard cubic feet per year
NO_X	nitrogen oxides
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
SIC	Standard Industrial Classification
SO_2	sulfur dioxide
Therms/yr	therms per year
T/mo	tons per month
T/yr	tons per any consecutive 12-month period
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PERMIT SCOPE

Purpose

1.1 The purpose for this Tier II operating permit and permit to construct is to establish facility-wide limits to protect ambient air quality standards.

1.2 This revised permit incorporates the provisions of Tier II operating permit and permit to construct No. 001-00190, issued August 23, 2002. This permit expires August 23, 2007, but only with regard to the Tier II operating permit requirements.

Regulated Sources

1.3 Table 1.1 below lists all sources of emissions that are regulated in this permit.

Table 1.1 REGULATED EMISSIONS SOURCES

Permit Section	Source Description	Emissions Control(s)
3	Reflow ovens (three total)	None
4	Wave solder machines (two total)	None
5	Natural gas-fired space heaters	None

2. FACILITY-WIDE CONDITIONS

Fugitive Emissions

2.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Odors

2.4 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

2.5 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Visible Emissions

2.6 The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

Excess Emissions

2.7 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets, and breakdowns.

Monitoring and Recordkeeping

2.8 The permittee shall maintain sufficient recordkeeping to assure compliance with all of the terms and conditions of this operating permit. Recording of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to Department representatives upon request.

Reports and Certifications

2.9 Any reporting required by this permit, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official as required by IDAPA 58.01.01.123. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete. Any reporting required by this permit shall be submitted to the following:

Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 N. Orchard
Boise, ID 83706-2239
Phone: (208) 373-0550 Fax: (208) 373-0287

Open Burning

2.10 The permittee shall comply with the requirements of IDAPA 58.01.01.600-616, *Rules for Control of Open Burning.*

Fuel-burning Equipment

2.11 In accordance with IDAPA 58.01.01.677, no person shall discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas.

3. REFLOW OVENS

Process Description and Emissions Controls

3.1 Process Description

For this process step, electronic parts are attached to printed wiring boards using solder paste. Solder paste is applied to the printed wiring board using a stencil at a thickness of 0.006 inches. The electronic part is then positioned on the solder paste and sent through one of three electric reflow ovens where the metallic components in the solder paste melt, thus attaching the electronic part. The finished product is a printed circuit board. The solder paste is comprised of lead, tin, and flux. The flux is nontoxic. This section of the permit contains the applicable requirements for the three reflow ovens.

3.2 Emissions Controls

Emissions from the reflow ovens are uncontrolled.

Emissions Limits

3.3 Reflow Oven Emissions Limits

Emissions of PM_{10}, lead, and tin from each reflow oven stack shall not exceed any corresponding emissions rate limits listed in the appendix of this permit.

[IDAPA 58.01.01.211.01, 5/1/94]

Operating Requirements

3.4 Solder Paste Throughput Limits

- The maximum daily throughput of solder paste shall not exceed 157.6 lb/day for each reflow oven.
- The maximum annual throughput of solder paste shall not exceed 28.76 T/yr for each reflow oven.

[IDAPA 58.01.01.211.01, 5/1/94]

3.5 Solder Paste Volatilization

Solder paste volatilization during reflow shall not exceed 2% by weight for each reflow oven.

[IDAPA 58.01.01.211.01, 5/1/94]

3.6 Solder Paste Composition

- The maximum lead content of the solder paste used shall not exceed 40% by weight.
- The maximum tin content of the solder paste used shall not exceed 70% by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

3.7 Reflow Oven Operating Temperature

The maximum operating temperature of each reflow oven shall not exceed 600°F (306°C).

[IDAPA 58.01.01.211.01, 5/1/94]

Monitoring and Recordkeeping Requirements

3.8 Solder Paste Throughput Monitoring

The permittee shall monitor and record the solder paste throughput for each reflow oven in pounds-per-day (lb/day), tons-per-month (T/mo), and tons per any consecutive 12-month period (T/yr) to demonstrate compliance with Permit Conditions 3.3 and 3.4. The tons-per-month throughputs shall be summed for the previous consecutive 12-month period to demonstrate compliance with the annual solder paste throughput limit.

[IDAPA 58.01.01.211.01, 5/1/94]

3.9 Solder Paste Monitoring

For the solder paste used in this process, the permittee shall maintain documentation of the lead, tin, and the non-volatile, or solids content, expressed as percent by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

3.11 Reflow Oven Temperature Monitoring

The permittee shall monitor and record the operating temperature for each reflow oven once per day.

[IDAPA 58.01.01.211.01, 5/1/94]

3.12 O&M Manual Requirements

The permittee shall develop an O&M manual for each reflow oven which describes the operations and maintenance procedures that will be followed to assure proper operation of the ovens to minimize the release of regulated air pollutant emissions. The manual shall remain onsite at all times and shall be made available to Department representatives upon request.

[IDAPA 58.01.01.211.01, 5/1/94]

4. WAVE SOLDER MACHINES

Process Description and Emissions Controls

4.1 Process Description

For this process step, electronic parts are attached to printed wiring boards using mechanical processes. Once the electronic part is mechanically positioned on a printed wiring board, the contact areas are fluxed and then passed over a wave of liquid solder in either of two electric wave solder machines where the electronic part is attached. The finished product is a printed circuit board. This section of the permit contains the applicable requirements for the two wave solder machines.

4.2 Emissions Controls

Emissions from the wave solder machines are uncontrolled.

Emissions Limits

4.3 Emissions Limits

Emissions of PM_{10} from the wave solder machines stacks shall not exceed any corresponding emissions rate limits listed in the appendix of this permit.

[IDAPA 58.01.01.211.01, 5/1/94]

Operating Requirements

4.4 Wave Solder Machine Flux Throughput Limits

- The maximum daily throughput of flux shall not exceed 5.83 lb/day for both wave solder machines.
- The maximum annual throughput of flux shall not exceed 2128 lb/yr for both wave solder machines.

[IDAPA 58.01.01.211.01, 5/1/94]

4.5 Flux Composition

The non-volatile, or solids content of the flux used shall not exceed 25% by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

4.6 Solder Composition

- The maximum lead content of the solder used shall not exceed 40% by weight.
- The maximum tin content of the solder used shall not exceed 70% by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

4.7 Solder Machine Temperature

The maximum temperature of the solder in the wave solder machines shall not exceed 600°F (306°C).

[IDAPA 58.01.01.211.01, 5/1/94]

Monitoring and Recordkeeping Requirements

4.8 Flux Throughput Monitoring

The permittee shall monitor and record the flux throughput for each wave solder machine in pounds-per-day (lb/day), pounds-per-month (lb/mo), and pounds per any consecutive 12-month period (lb/yr) to demonstrate compliance with Permit Conditions 4.3 and 4.4. The pounds-per-month throughputs shall be summed for the previous consecutive 12-month period to demonstrate compliance with the annual flux throughput limit.

[IDAPA 58.01.01.211.01, 5/1/94]

4.9 Solder Lead and Tin Content Monitoring

For the solder used in this process, the permittee shall maintain documentation of the lead and tin content, expressed as percent by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

4.10 Flux Solids Content Monitoring

For the flux used in this process, the permittee shall maintain documentation of the non-volatile, or solids content, expressed as percent by weight.

[IDAPA 58.01.01.211.01, 5/1/94]

4.11 Wave Solder Machine Oven Temperature Monitoring

The permittee shall monitor and record the temperature of the solder in each wave solder machine once per day.

[IDAPA 58.01.01.211.01, 5/1/94]

4.12 O&M Manual Requirements

The permittee shall develop an O&M manual for each wave solder machine which describes the operations and maintenance procedures that will be followed to assure proper operation of the wave solder machines to minimize the release of regulated air pollutant emissions. The manual shall remain onsite at all times and shall be made available to Department representatives upon request.

[IDAPA 58.01.01.211.01, 5/1/94]

FUEL-BURNING EQUIPMENT

Process Description and Emissions Controls

5.1 Process Description

The fuel-burning equipment at this facility are 23 natural gas-fired space heaters. The combined maximum heat input capacity of the fuel-burning equipment is 5.231 MMBtu/hr.

5.2 Emissions Controls

Emissions from the fuel-burning equipment are uncontrolled.

Emissions Limits

5.3 Emissions Limits

Emissions of PM_{10}, CO, NO_x, SO_2, and VOC's from the fuel-burning equipment shall not exceed any corresponding emissions rate limits listed in the appendix of this permit.

[IDAPA 58.01.01.211.01, 5/1/94]

Operating Requirements

5.4 Fuel Type

Only natural gas shall be combusted in the fuel-burning equipment.

[IDAPA 58.01.01.211.01, 5/1/94]

5.5 Throughput Limits

The fuel-burning equipment shall not exceed 45.83 MMscf/yr, or 459, 236 Therms/yr.

[IDAPA 58.01.01.211.01, 5/1/94]

Monitoring and Recordkeeping Requirements

5.5 Fuel Monitoring

The permittee shall monitor and record the amount of natural gas combusted in the fuel-burning equipment monthly and annually to demonstrate compliance with Permit Conditions 5.3, 5.4, and 5.5. Throughput shall be recorded as million standard cubic feet per year (MMscf/yr), or as therms per year (Therms/yr). The throughput records shall remain onsite for the most recent five year period and shall be made available to Department representatives upon request.

[IDAPA 58.01.01.211.01, 5/1/94]

5. APPENDIX - FACILITY-WIDE EMISSION RATE LIMITS

Table 6.1 REFLOW AND WAVE MACHINE EMISSION LIMITS

Western Electronics Emission Limits[a] – Hourly (lb/hr), and Annual[b] (T/yr)						
Source Description	**Hourly PM_{10} Emissions (lb/hr)[c]**	**Annual PM_{10} Emissions (T/yr)[c]**	**Hourly Lead Emissions (lb/day)**	**Annual Lead Emissions (T/yr)**	**Hourly Tin Emissions (lb/day)**	**Annual Tin Emissions (T/yr)**
Each Reflow Oven	0.09	0.37	1.26	0.23	2.2	0.40
Combined wave solder machines	0.065	0.28	---	---	---	---

Assuming that all PM_{10} consist of lead and tin. Fluxes have zero lead and tin content per MSDS.

[a] As determined by a pollutant-specific U.S. EPA reference method, a Department-approved alternative, or as determined by the Department's emissions estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emission rate by the allowable hours-per-year that the process(es) may operate(s), or by actual annual production rates.

[c] Includes condensibles.

Table 6.2 FUEL-BURNING EQUIPMENT EMISSIONS LIMITS

Western Electronics Emissions Limits[a] – Annual[b] (T/yr)					
Source Description	**PM_{10} T/yr[c]**	**CO T/yr**	**NO_x T/yr**	**SO_2 T/yr**	**VOC T/yr**
Total fuel-burning equipment	0.3	2.0	2.3	0.014	0.2

[a] As determined by a pollutant-specific U.S. EPA reference method, a Department-approved alternative, or as determined by the Department's emissions estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emission rate by the allowable hours-per-year that the process(es) may operate(s), or by actual annual production rates.

[c] Includes condensibles.

6. GENERAL PROVISIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The emission of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code §39-101 et seq.

2. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain and operate in good working order all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable laws for the control of air pollution.

3. The permittee shall allow the Director, and/or his authorized representative(s), upon the presentation of credentials:

   - To enter upon the permittee's premises where an emissions source is located, or in which any records are required to be kept under the terms and conditions of this permit.
   - At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and to require stack emissions testing (i.e., performance tests) in conformance with state-approved or accepted EPA procedures when deemed appropriate by the Director.

4. Except for data determined to be confidential under Section 9-342A *Idaho Code*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate regional office of the Department of Environmental Quality.

5. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.

6. In the event of any change in control or ownership of source(s) from which the authorized emissions emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter; a copy of which shall be forwarded to the Director.

7. This permit shall be renewable on the expiration date, provided the permittee submits any and all information necessary for the Director to determine the amount and type of air pollutants emitted from the equipment for which this permit is granted. Failure to submit such information within 60 days after receipt of the Director's request shall cause the permit to become void.

8. The Director may require the permittee to develop a list of operation and maintenance procedures to be approved by the Department. Such list of procedures shall become a part of this permit by reference, and the permittee shall adhere to all of the operation and maintenance procedures contained therein.

9. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.